STIC Search Report
EIC 2100

STIC Database Tracking Number: 153123

TO:	From:
Neveen Abel-Jalil **Location: RND 3A20** **Art Unit : 2165** **Wednesday, May 11, 2005** **Case Serial Number: 09/923573**	**David Holloway** **Location: EIC 2100** **RND 4B19** **Phone: 2-3528** **david.holloway@uspto.gov**

Search Notes

Dear Examiner Abel-Jalil,

Attached please find your search results for above-referenced case.
Please contact me if you have any questions or would like a re-focused search.

David

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Set     Items   Description
S1     503030   ONLINE OR INTERNET? OR NETWORK? OR INTRANET? OR WAN OR VID-
            EOCONFER? OR TELECONF? OR LAN OR WANS OR LANS OR ON()LINE
S2    2136113   RESPONS? OR ANSWER? OR VOTE? OR VOTING? OR REGISTRAT? OR R-
            EGISTER? OR REPLY OR REPLIES OR RESULT?
S3     172294   QUER? OR INQUIR? OR QUESTION? OR POLL OR POLLS OR POLLING -
            OR FEEDBACK?
S4     113497   COLLABORAT? OR CONSENSUS? OR DECISION? OR AGREE? OR ARBITR-
            AT?
S5       9503   S1 AND S4
S6        278   S5 AND S2 AND S3
S7    3308268   SETPOINT? OR LIMIT? OR THRESHOLD? OR MAX OR MIN OR MINIMUM?
             OR MAXIMUM? OR LEAST? OR FLOOR? OR CEILING? OR SET()POINT?
S8         47   S6 AND S7
S9    4171399   REPEAT? OR REITERAT? OR ITERAT? OR AGAIN? OR ANOTHER? OR F-
            OLLOWING? OR SECOND OR 2ND
S10        24   S8 AND S9
S11        53   S1(3N)S4 AND (S2 OR S3) AND S7
S12      7977   S3(5N)S9
S13        11   S6 AND S12
S14       101   S13 OR S11 OR S10 OR S8
S15        56   S14 AND IC=G06F
S16        40   S15 NOT AD=20010807:20030807
S17        38   S16 NOT AD=20030807:20050801
S18        38   IDPAT (sorted in duplicate/non-duplicate order)
S19        38   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Nov 1976-2005/Jan(Updated 050506)
        (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200529
        (c) 2005  Thomson Derwent
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19/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

016010417 **Image available**
WPI Acc No: 2004-168268/200416
Related WPI Acc No: 2003-420370
XRPX Acc No: N04-134236
Page information providing method, involves receiving response **based on** questions , **evaluating** responses against **predetermined criterion, and changing information on page based on evaluation**
Patent Assignee: COLEMAN K B (COLE-I)
Inventor: COLEMAN K B
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040024656	A1	20040205	US 2000209228	P	20000602	200416 B
			US 2000615177	A	20000713	
			US 2000737926	A	20001215	

Priority Applications (No Type Date): US 2000209228 P 20000602; US 2000615177 A 20000713; US 2000737926 A 20001215
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040024656	A1		25	G06F-017/60	Provisional application US 2000209228
					CIP of application US 2000615177

Abstract (Basic): US 20040024656 A1
NOVELTY - The method involves providing a **question** on a page, and receiving a **response** based on the **questions** . The **responses** are evaluated **against** a predetermined criterion and the information on the page is changed based on the evaluation. A derived measure is generated from the **responses** , the derived measure is input to a fuzzy logic engine and a membership grade is assigned to derived measures.
USE - Used for assisting **online** shopper or consumer with purchasing **decision** .
ADVANTAGE - The method provides an interactive product selector for use by consumers of goods and services that provides a positive user experience while providing valuable guidance to the user during a selection process.
DESCRIPTION OF DRAWING(S) - The drawing shows a schematic diagram of entities involved in the page information providing method.
Client (102)
Servers (104)
Providers (108)
Internet (110)
Local area **network** (112)
pp; 25 DwgNo 1/9
Title Terms: PAGE; INFORMATION; METHOD; RECEIVE; RESPOND; BASED; **QUESTION** ; EVALUATE; RESPOND; PREDETERMINED; CRITERIA; CHANGE; INFORMATION; PAGE; BASED; EVALUATE
Derwent Class: T01; T05
International Patent Class (Main): **G06F-017/60**
International Patent Class (Additional): **G06F-015/18**
File Segment: EPI

19/5/9 (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014012651 **Image available**
WPI Acc No: 2001-496865/200154
XRPX Acc No: N01-368173
Internet **based hierarchical product classification system for e-commerce, has logic for testing product descriptions** against decision **node** queries **until a** decision **node** query **leading to branch terminus is reached**
Patent Assignee: PRICERADAR INC (PRIC-N)
Inventor: CAIN R A; WARFIELD R W
Number of Countries: 094 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200155886	A2	20010802	WO 2001US1944	A	20010119	200154	B
AU 200132883	A	20010807	AU 200132883	A	20010119	200174	

Priority Applications (No Type Date): US 2001766301 A 20010118; US 2000177240 P 20000120; US 2001765697 A 20010118; US 2001766300 A 20010118
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200155886	A2	E	102	G06F-017/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200132883	A		G06F-017/00	Based on patent WO 200155886

Abstract (Basic): WO 200155886 A2

NOVELTY - The system comprises of a logic for classifying product entries having product descriptions with a branch terminus of the **decision** tree by assigning the product entry to a tree level of the **decision** tree. The product descriptions are tested **against decision** node **queries** leading from the tree level until a **decision** node **query** leading to a branch terminus is satisfied.

DETAILED DESCRIPTION - The system comprises of logic defining branched **decision** tree which includes several **decision** node, each node interconnecting a branch leading to either another tree level or branch terminus. The logic associated with each **decision** node defines a **query** that needs to be satisfied by a product description of a product entry to be classified in order for that product entry to be classified with the tree level or branch terminus to which the branch associated with that **decision** node extends. INDEPENDENT CLAIMS are also included for the following:

(a) Automated product entry classification method;
(b) Product information database;
(c) Product search system;
(d) Product search method;
(e) Automated product information profiling method

USE - In e-commerce for classifying product information obtained through computer **network** .

ADVANTAGE - The **network** based system provides a consumer with a comparative resource of identical products or services available on a **network** and a valuation information associated with each available corresponding product or service. The product classification system accommodates millions of product descriptions, both current and past, with database and product descriptions are classified into tens or hundreds of thousands of categories and sub-categories with assistance of **decision** node **queries** . The number of text fields that need to be searched by boolean seaching **decision** node **queries** instead of

product descriptions, is reduced. By returning to the user as a search **result** , the categories which match the user's **query** , the user is able to select categories of the system's taxonomy which better match what the user was looking for and thus the user is able to use the search of **decision** node **queries** and matching categories to navigate taxonomy to focus in on the items the user is seeking to identify.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram illustrating hierarchical product classification system.

pp; 102 DwgNo 1/7

Title Terms: BASED; HIERARCHY; PRODUCT; CLASSIFY; SYSTEM; LOGIC; TEST; PRODUCT; DESCRIBE; DECIDE; NODE; **QUERY** ; DECIDE; NODE; **QUERY** ; LEADING; BRANCH; TERMINAL; REACH

Derwent Class: T01

International Patent Class (Main): **G06F-017/00**

File Segment: EPI

19/5/11 (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013956946 **Image available**
WPI Acc No: 2001-441160/200147
Related WPI Acc No: 2001-354652; 2001-397419; 2001-456994; 2001-457005; 2001-464784; 2001-580592; 2001-596340
XRPX Acc No: N01-326395

Network **system for content** collaboration **among group of participants; uses logic in communication with database to asynchronously dynamically update binary content in dynamic content region in** response **to input**

Patent Assignee: FIREDROP INC (FIRE-N); ZAPLET INC (ZAPL-N)
Inventor: AXE B; EVANS S R; HANSON M; MILLER G
Number of Countries: 094 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200122246	A1	20010329	WO 2000US40745	A	20000824	200147	B
AU 200126127	A	20010424	AU 200126127	A	20000824	200147	
US 6507865	B1	20030114	US 99151476	P	19990830	200313	
			US 99151650	P	19990831		
			US 99426648	A	19991025		
			US 99427152	A	19991025		
			US 99427378	A	19991025		
			US 2000483221	A	20000114		

Priority Applications (No Type Date): US 2000483221 A 20000114; US 99151476 P 19990830; US 99151650 P 19990831; US 99426648 A 19991025; US 99427152 A 19991025; US 99427378 A 19991025
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200122246	A1	E	54	G06F-015/16	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200126127	A	G06F-015/16	Based on patent WO 200122246
US 6507865	B1	G06F-015/16	Provisional application US 99151476
			Provisional application US 99151650
			CIP of application US 99426648
			CIP of application US 99427152
			CIP of application US 99427378

Abstract (Basic): WO 200122246 A1

NOVELTY - At **least** one dynamic content region in an electronic medium has binary content. An interface region in the electronic medium accepts input from one of any of the participants and an external source in data communication with a server. Logic is in communication with the database to asynchronously dynamically update the binary content in the dynamic content region in **response** to the input.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(a) a method of content collaboration among a group of participants

(b) a content collaboration tool

(c) a method for creating a greeting card among group of participants

(d) a method for managing tasks among group of participants

(e) a method of tracking stocks among group of participants

(f) a network system

(g) a computer software residing on a computer readable medium at device connected to network

USE - In content collaboration among a group of participants connected to networks using a dynamic distribution of data

ADVANTAGE - Improves access to content that may be checked out,

modified, and then checked back into some repository. Reduces the time required for each participant to make his or her changes excluding problem of locking-unlocking of the content or keep checking to see if the content is unlocked.

DESCRIPTION OF DRAWING(S) - The drawing is a diagram of a data structure for a media for communicating information and supports collaboration among participants in group connected to network (referred as a 'zaplet').

pp; 54 DwgNo 4/17

Title Terms: NETWORK; SYSTEM; CONTENT; GROUP; PARTICIPATING; LOGIC; COMMUNICATE; DATABASE; ASYNCHRONOUS; DYNAMIC; UPDATE; BINARY; CONTENT; DYNAMIC; CONTENT; REGION; RESPOND; INPUT

Derwent Class: T01

International Patent Class (Main): **G06F-015/16**

File Segment: EPI

19/5/12 (Item 12 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013491711 **Image available**
WPI Acc No: 2000-663654/200064
XRPX Acc No: N00-491680
Approximate answers **provision method for aggregate** queries , **involves summarizing sub-cube corresponding to relational database, using histogram techniques and computing error/space benefits**
Patent Assignee: LUCENT TECHNOLOGIES INC (LUCE)
Inventor: GANTI V; POOSALA V
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6108647	A	20000822	US 9882057	A	19980521	200064	B

Priority Applications (No Type Date): US 9882057 A 19980521
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6108647	A		12	G06F-017/30	

Abstract (Basic): US 6108647 A
NOVELTY - A **query** containing input data is received. A summary of data cube corresponding to relational database is pre computed and a sub-cube is summarized using histogram techniques. Error/space benefits are computed for each summary corresponding to each technique. An approximate **answer** is calculated using histogram technique corresponding to **maximum** error/space benefit and is output.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the **following** :
(a) computer system for providing an approximate **answer** to the **query** ;
(b) program product
USE - For use in **decision** support applications or **online** analytical processing applications e.g. business enterprise, large multi-national corporation, etc. Also for use in real time applications such as telecom switches.
ADVANTAGE - Provides quick and approximate **answers** to aggregate **queries** by pre computing summary of the data cube using histograms and **answering queries** using smaller summary. Identifies accurate histogram classes and distributes space among the histograms in various sub-cubes such that the errors are minimized while maximizing computer resources.
DESCRIPTION OF DRAWING(S) - The figure shows the flowchart for providing approximate **answers** to aggregate **queries** .
pp; 12 DwgNo 1/6
Title Terms: APPROXIMATE; **ANSWER** ; PROVISION; METHOD; AGGREGATE; **QUERY** ; SUB; CUBE; CORRESPOND; RELATED; DATABASE; HISTOGRAM; TECHNIQUE; COMPUTATION; ERROR; SPACE; BENEFICIAL
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

19/5/13 (Item 13 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012336283 **Image available**
WPI Acc No: 1999-142390/199912
Related WPI Acc No: 1999-633505; 2000-255347; 2002-009668; 2002-081886; 2002-712614
XRPX Acc No: N99-103516

Information filtering method in computer system

Patent Assignee: KOSAK D M (KOSA-I); LANG A K (LANG-I)
Inventor: KOSAK D M; LANG A K
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5867799	A	19990202	US 96627436	A	19960404	199912	B

Priority Applications (No Type Date): US 96627436 A 19960404
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5867799	A		34	G06F-017/30	

Abstract (Basic): US 5867799 A

NOVELTY - The **feedback** data is received from the user in **response** to the proposed information. The dynamic information characterization is updated by updating at **least** one of the adaptive content profile and adaptive **collaboration** profile in **response** to **feedback** data.

DETAILED DESCRIPTION - The dynamic information characterization is provided which has multiple encoded profiles including adaptive content profile and adaptive **collaboration** profile. The raw information are filtered **responsively** in **response** to dynamic information characterization to produce a proposed information. The information is presented to the user. INDEPENDENT CLAIMS are also included for the **following** :

(a) information filtering apparatus in computer system;
(b) computer program product;
(c) **network** operable information processing system;
(d) operating method of information processing system in **network**

USE - In computer **networking** system.

ADVANTAGE - Provides clients with information credibility and personal preferences by implementing adaptive credibility filtering.

DESCRIPTION OF DRAWING(S) - The figure shows flow chart of information filtering method.

pp; 34 DwgNo 2/7

Title Terms: INFORMATION; FILTER; METHOD; COMPUTER; SYSTEM
Derwent Class: T01
International Patent Class (Main): **G06F-017/30**
File Segment: EPI

19/5/28 (Item 28 from file: 347)
DIALOG(R)File 347:JAPIO

07281555 **Image available**
CONSULTANT SYSTEM

PUB. NO.: 2002-150021 [JP 2002150021 A]
PUBLISHED: May 24, 2002 (20020524)
INVENTOR(s): SUZUKI OSAMU
APPLICANT(s): MITSUBISHI ELECTRIC BUILDING TECHNO SERVICE CO LTD
APPL. NO.: 2000-340703 [JP 2000340703]
FILED: November 08, 2000 (20001108)
INTL CLASS: **G06F-017/60**

ABSTRACT

PROBLEM TO BE SOLVED: To provide a consultant system capable of easily receiving a request via an opened **network** and cheaply solving the contents of the request.

SOLUTION: In the consultant system in which a server 1 of a provider acting as a consultant mediator, a plurality of client terminals 2 and a plurality of consultant terminals 3 are connected via the opened **network** , the server 1 displays on a homepage at **least** a **question** and the amount of money from the client terminal 2 side, displays an amount from the consultant terminal 3 side capable of showing the **answer** to the **question** , and leads the client and the consultant to sign an **agreement** when their amounts reach a compromise, and the consultant terminal 3 reaching the **agreement** discloses a survey **result** on delivery time to the client terminal 2.

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Set     Items   Description
S1    2880376   ONLINE OR INTERNET? OR NETWORK? OR INTRANET? OR WAN OR VID-
            EOCONFER? OR TELECONF? OR LAN OR WANS OR LANS OR ON()LINE
S2   15742659   RESPONS? OR ANSWER? OR VOTE? OR VOTING? OR REGISTRAT? OR R-
            EGISTER? OR REPLY OR REPLIES OR RESULT?
S3    1636681   QUER? OR INQUIR? OR QUESTION? OR POLL OR POLLS OR POLLING
            OR FEEDBACK?
S4    2545456   COLLABORAT? OR CONSENSUS? OR DECISION? OR AGREE? OR ARBITR-
            AT?
S5    6562864   SETPOINT? OR LIMIT? OR THRESHOLD? OR MAX OR MIN OR MINIMUM?
             OR MAXIMUM? OR LEAST? OR FLOOR? OR CEILING? OR SET()POINT?
S6    6097169   REPEAT? OR REITERAT? OR ITERAT? OR AGAIN? OR ANOTHER? OR F-
            OLLOWING? OR SECOND OR 2ND
S7        392   S1 AND S2 AND S3 AND S4 AND S5 AND S6
S8      26211   S1(3N)S4
S9         33   S7 AND S8
S10    357519   (S2 OR S5)(3N)S6
S11        46   S10 AND S7
S12        77   S9 OR S11
S13        64   RD (unique items)
S14        50   S13 NOT PY>2001
File   8:Ei Compendex(R) 1970-2005/May W1
         (c) 2005 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2005/Apr
         (c) 2005 ProQuest Info&Learning
File  65:Inside Conferences 1993-2005/May W2
         (c) 2005 BLDSC all rts. reserv.
File   2:INSPEC 1969-2005/Apr W4
         (c) 2005 Institution of Electrical Engineers
File  94:JICST-EPlus 1985-2005/Mar W3
         (c)2005 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2005/May 10
         (c) 2005 The Gale Group
File   6:NTIS 1964-2005/May W1
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
File 144:Pascal 1973-2005/May W1
         (c) 2005 INIST/CNRS
File  34:SciSearch(R) Cited Ref Sci 1990-2005/May W1
         (c) 2005 Inst for Sci Info
File  99:Wilson Appl. Sci & Tech Abs 1983-2005/Apr
         (c) 2005 The HW Wilson Co.
File  95:TEME-Technology & Management 1989-2005/Apr W1
         (c) 2005 FIZ TECHNIK
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14/5/3 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

05762648 E.I. No: EIP01015488606
Title: On the convergence of multiattribute weighting methods
Author: Poyhonen, Mari; Hamalainen, Raimo P.
Corporate Source: Helsinki Univ of Technology, Espoo, Finl
Source: European Journal of Operational Research v 129 n 3 Mar 2001. p 569-585
Publication Year: 2001
CODEN: EJORDT ISSN: 0377-2217
Language: English
Document Type: JA; (Journal Article) Treatment: T; (Theoretical)
Journal Announcement: 0102W5
Abstract: The convergent validity of five multiattribute weighting methods is studied in an **Internet** experiment. This is the first experiment where the subjects created the alternatives and attributes themselves. Each subject used five methods to assess attribute weights - one version of the analytic hierarchy process (AHP), direct point allocation, simple multiattribute rating technique (SMART), swing weighting, and tradeoff weighting. They can all be used **following** the principles of multiattribute value theory. Furthermore, SMART, swing, and AHP ask the **decision** makers to give directly the numerical estimates of weight ratios although the elicitation **questions** are different. In earlier studies these methods have yielded different weights. Our **results** suggest that the **resulting** weights are different because the methods explicitly or implicitly lead the **decision** makers to choose their **responses** from a **limited** set of numbers. The other consequences from this are that the spread of weights and the inconsistency between the preference statements depend on the number of attributes that a **decision** maker considers simultaneously. (Author abstract) 30 Refs.
Descriptors: ***Decisio** n support systems; **Internet** ; Convergence of numerical methods; Process engineering; Hierarchical systems; **Decision** theory; **Decision** making
Identifiers: Multiattribute weighting methods; Analytic hierarchy process (AHP); Multi-attribute value theory
Classification Codes:
912.2 (Management); 921.6 (Numerical Methods); 913.1 (Production Engineering)
723 (Computer Software); 912 (Industrial Engineering & Management); 921 (Applied Mathematics); 913 (Production Planning & Control)
72 (COMPUTERS & DATA PROCESSING); 91 (ENGINEERING MANAGEMENT); 92 (ENGINEERING MATHEMATICS)

14/5/8 (Item 3 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01789998 ORDER NO: AADAA-I9998233
Computing and querying **datacubes**
Author: Zaman, Kazi Atif-Uz
Degree: Ph.D.
Year: 2001
Corporate Source/Institution: Columbia University (0054)
Adviser: Kenneth A. Ross
Source: VOLUME 61/12-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 6575. 128 PAGES
Descriptors: COMPUTER SCIENCE
Descriptor Codes: 0984
ISBN: 0-493-06679-9

Datacube **queries** compute aggregates over database relations at a variety of granularities, and they constitute an important class of **decision** support **queries** . In this thesis we study problems pertaining to the computation of datacubes and frameworks for **querying** them.

Often one wants only datacube output tuples whose aggregate value satisfies a certain condition, such as exceeding a given **threshold** . For example, one might ask for all combinations of model, color, and year of cars (including the special value "ALL" for each of the dimensions) for which the total sales exceeded a given amount of money.

Computing a selection over a datacube can naively be done by computing the entire datacube and checking if the selection condition holds for each tuple in the **result** . However, it is often the case that selections are relatively restrictive, meaning that a lot of work computing datacube tuples is "wasted" since those tuples don't satisfy the selection condition.

Our approach is to develop algorithms for processing a datacube **query** using the selection condition internally during the computation. By making use of the selection condition within the datacube computation, we can safely prune parts of the computation and end up with a more efficient computation of the **answer** . Our first technique, called "specialization", uses the fact that a tuple in the datacube does not meet the given **threshold** to infer that all finer level aggregates cannot meet the **threshold** . We propose a scheme of specialization transformations on the underlying data sets, using properties of the aggregates and **threshold** functions.

Our **second** technique is called "generalization", and applies in the case where the actual value of the aggregate is not needed in the output, but used just to compare with the **threshold** . We refer to these as "projected datacube" **queries** . Generalization uses the fact that a tuple meets the given **threshold** to infer that all coarser level aggregates also meet the **threshold** . We also propose a scheme of generalization transformations. We demonstrate that computing the median is easier for projected datacubes.

In the **second** major piece of work we study a main memory based framework for **querying** datacubes. For large datasets with many dimensions, the complete datacube may be very large. In order to support **on - line** access to datacube **results** , one would like to perform some precomputation to enhance **query** performance.

We propose a main memory based framework which provides rapid **response** to **queries** and requires considerably less maintenance cost than a disk based scheme in an append-only environment. (Abstract shortened by UMI.)

14/5/9 (Item 4 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01786652 ORDER NO: AADAA-I1401074
Decision feedback **equalization using hybrid lattice-neural** network **structures**
Author: Mahmood, Kashif
Degree: M.S.
Year: 2000
Corporate Source/Institution: King Fahd University of Petroleum and Minerals (Saudi Arabia) (1088)
Source: VOLUME 39/01 of MASTERS ABSTRACTS.
PAGE 264. 126 PAGES
Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL ; ARTIFICIAL INTELLIGENCE
Descriptor Codes: 0544; 0800
ISBN: 0-599-90282-5

The non-linear structure of neural **networks** makes it very suitable for channel equalization, especially when the channel is heavily distorted. In this thesis we investigate the performance of three different Neural **Network** based **Decision Feedback** Equalization schemes with and without Lattice filler. The lattice structures are well known for their fast convergence and insensitivity to the eigen value spread of the channel autocorrelation matrix. First, the performance of Radial Basis, Function **network** trained through simple **Least** Mean Square algorithm is investigated for **Decision Feedback** Equalization. **Second** , the Multi Layer Perceptron trained through Recursive **Least** Squares algorithm is used for DFE and its performance is investigated. Finally, the hybrid neural **network** based structure is proposed for **on - line** training of DFE.

These proposed schemes are investigated by means of computer simulations and **results** are presented for static and time varying channels in the form of Learning Curves and Bit Error Rate for different equalizer configurations.

14/5/43 (Item 8 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

04903184 Genuine Article#: UQ699 Number of References: 22
Title: LOWER BOUNDS ON LEARNING DECISION LISTS AND TREES
Author(s): HANCOCK T; JIANG T; LI M; TROMP J
Corporate Source: SIEMENS AG,CORP RES,755 COLL RD E/PRINCETON//NJ/08540; MCMASTER UNIV,DEPT COMP SCI & SYST/HAMILTON/ON L8S 4K1/CANADA/; UNIV WATERLOO,DEPT COMP SCI/WATERLOO/ON N3L 3G1/CANADA/
Journal: INFORMATION AND COMPUTATION, 1996, V126, N2 (MAY 1), P114-122
ISSN: 0890-5401
Language: ENGLISH Document Type: ARTICLE
Geographic Location: USA; CANADA
Subfile: SciSearch; CC ENGI--Current Contents, Engineering, Technology & Applied Sciences
Journal Subject Category: MATHEMATICS, APPLIED; COMPUTER SCIENCE, INFORMATION SYSTEMS
Abstract: k- **Decision** lists and **decision** trees play important roles in learning theory as well as in practical learning systems. k- **Decision** lists generalize classes such as monomials, k-DNF, and k-CNF, and like these subclasses they are polynomially PAC-learnable [R. Rivest, Mach. Learning 2 (1987), 229-246], This leaves open the **question** of whether k- **decision** lists can be learned as efficiently as k-DNF. We **answer** this **question** negatively in a certain sense, thus disproving a claim in a popular textbook [M. Anthony and N. Biggs, ''Computational Learning Theory,'' Cambridge Univ. Press, Cambridge, UK, 1992]. **Decision** trees, on the other hand, are not even known to be polynomially PAC-learnable, despite their widespread practical application. We will show that **decision** trees are not likely to be efficiently PAC-learnable. We summarize our specific **results** . The **following** problems cannot be approximated in polynomial time within a factor of 2(log delta n) for any delta > 1, unless NP subset of DTIME[2(polylog n)]: a generalized set cover, k- **decision** lists, k- **decision** lists by monotone **decision** lists, and **decision** trees. **Decision** lists cannot be approximated in polynomial time within a factor oi n(delta), for some constant delta > 0, unless NP = P. Also, k- **decision** lists with 1 0-1 alternations cannot be approximated within a factor log' n unless NP subset of DTIME[n(O(log log n))] (providing an interesting comparison to the upper bound obtained by A. Dhagat and L. Hellerstein [in ''FOCS '94,'' pp. 64-74]). (C) 1996 Academic Press, Inc.
Research Fronts: 94-3120 003 (MACHINE LEARNING; **DECISION** TREE INDUCTION; KNOWLEDGE ACQUISITION; NEURAL **NETWORKS** ; UNIFIED FRAMEWORK; DOMAIN OF PROGRAMMING)
94-1025 002 (NEURAL **NETWORKS** ; PAC LEARNABILITY; VAPNIK-CHERVONENKIS BOUNDS; BOOLEAN COMBINATIONS)
94-1237 001 (APPROXIMATION OF **MAXIMUM** SATISFIABILITY; SET COVERING PROBLEM; EFFICIENT ALGORITHM)
Cited References:
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ARORA A, 1992, P14, P 33 IEEE S FOUND CO
AUER P, 1995, P21, P 12 INT MACH LEARN
BELLARE M, 1993, P294, 25TH P ACM S THEOR C
BLUMER A, 1989, V35, P929, J ASSOC COMPUT MACH
BOARD R, 1990, P54, P 22 ACM S THEOR COM

14/5/45 (Item 10 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

03696957 Genuine Article#: PY647 Number of References: 24
Title: DISTRIBUTED BINARY HYPOTHESIS-TESTING WITH FEEDBACK
Author(s): PADOS DA; HALFORD KW; KAZAKOS D; PAPANTONIKAZAKOS P
Corporate Source: UNIV VIRGINIA,DEPT ELECT ENGN,THORNTON HALL/CHARLOTTESVILLE//VA/22903; UNIV SW LOUISIANA,DEPT ELECT ENGN/LAFAYETTE//LA/70504; UNIV ALABAMA,DEPT ELECT ENGN/TUSCALOOSA//AL/35487
Journal: IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS, 1995, V25, N1 (JAN), P21-42
ISSN: 0018-9472
Language: ENGLISH Document Type: ARTICLE
Geographic Location: USA
Subfile: SciSearch; CC ENGI--Current Contents, Engineering, Technology & Applied Sciences
Journal Subject Category: COMPUTER SCIENCE, CYBERNETICS; ENGINEERING, ELECTRICAL & ELECTRONIC
Abstract: The problem of binary hypothesis testing is revisted in the context of distributed detection with **feedback** . Two basic distributed structures with **decision feedback** are considered. The first structure is the fusion center **network** , with **decision feedback** connections from the fusion center element to each one of the subordinate **decisionmakers** . The **second** structure consists of a set of detectors that are fully interconnected via **decision feedback** . Both structures are optimized in the Neynam-Pearson sense by optimizing each **decisionmaker** individually. Then, the time evolution of the power of the tests is derived. Definite conclusions regarding the gain induced by the **feedback** process and direct comparisons between the two structures and the optimal centralized scheme are obtained through asymptotic studies (that is, assuming the presence of asymptotically many local detectors). The behavior of these structures is also examined in the presence of variations in the statistical description of the hypotheses. Specific robust designs are proposed and the benefits from robust operations are established. Numerical **results** provide additional support to the theoretical arguments.
Identifiers--KeyWords Plus: **DECISION** FUSION; RADAR DETECTION; SYSTEMS; OPTIMUM
Research Fronts: 93-3846 002 (DISTRIBUTED DETECTION; DESIGN OF QUANTIZERS; OPTIMAL MULTIPLE LEVEL **DECISION** FUSION)
93-0171 001 (REGRESSION DIAGNOSTICS; BIAS ROBUST ESTIMATION; MULTIPLE OUTLIERS; **LEAST** MEDIAN SQUARES; PARTIAL RESIDUAL PLOTS)
93-7654 001 (NEURAL **NETWORKS** ; CONCEPTUAL RULE LEARNING; CONNECTIONIST MODEL FOR CATEGORY PERCEPTION)
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CONTE E, 1983, V130, P484, IEE PROC-F
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PAPANTONIKAZAKO.P, 1979, V7, P989, ANN PROBAB
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TENNEY RR, 1981, V17, P501, IEEE T AERO ELEC SYS
THOMOPOULOS SCA, 1987, V23, P644, IEEE T AERO ELEC SYS
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VISWANATHAN R, 1988, V24, P366, IEEE T AERO ELEC SYS

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Set     Items   Description
S1     117896   MC=(T01-N01D1A OR T01-N01D1B OR T01-N03A1 OR T01-S03)
S2      48632   IC=G06F-007
S3       4536   S1 AND S2
S4        273   S3 AND (LIMIT? OR SETPOINT? OR SET()POINT? OR CEILING? OR -
            FLOOR? OR MAXIMUM? OR MINIMUM? OR THRESHOLD?)
S5     367341   QUER? OR REQUEST? OR INQUIR? OR POLL OR POLLING OR QUESTIO-
            N? OR (ELECTRONIC? OR DIGITAL)(N)FORM? OR FEEDBACK?
S6         69   S4 AND S5
S7      22894   (DSS OR DECISION()SUPPORT? OR COLLABORAT? OR CONSENSUS? OR
            AGREEMENT? OR VOTING? OR VOTES OR ARBITRAT?)
S8      12551   S5(3N)(SECOND? OR 2ND OR REPEAT? OR ANOTHER? OR AGAIN? OR -
            ITERAT? OR REITERAT?)
S9          8   S6 AND (S7 OR S8)
S10     12551   S5 AND S8
S11     10104   IM OR INSTANT()MESSAG? OR IRC OR CHAT? ? OR VIDEOCONFERENC?
             OR CUCME OR MESSENGER?
S12        30   S10 AND S11
S13        11   S12 AND (S1 OR S2)
S14        19   S9 OR S13
S15        19   IDPAT (sorted in duplicate/non-duplicate order)
S16        19   IDPAT (primary/non-duplicate records only)
S17     31768   (LIMIT? OR SETPOINT? OR SET()POINT? OR CEILING? OR FLOOR? -
            OR MAXIMUM? OR MINIMUM? OR THRESHOLD?)(3N)(SECOND OR 2ND OR R-
            EPEAT? OR ANOTHER? OR AGAIN? OR ITERAT? OR REITERAT? OR ECHO)
S18        38   S17 AND S7
S19         0   S18 AND S11
S20        34   S18 NOT AD=20010802:20030802
S21        34   S20 NOT AD=20030802:20050601
S22        64   S21 OR S12
S23        26   S22 AND IC=G06F
S24        26   IDPAT (sorted in duplicate/non-duplicate order)
S25        26   IDPAT (primary/non-duplicate records only)
S26   2005398   RESPONS? OR REPLY? OR ANSWER? OR REPLIES OR FEEDBACK? OR V-
            OTE? OR VOTING OR DECISION? OR RESULT?
S27       124   S26 AND S7 AND S8
S28         0   S27 AND S17
S29        13   S27 AND (SETPOINT? OR LIMIT? OR SET()POINT? OR CEILING? OR
            FLOOR? OR THRESHOLD? OR BENCHMARK? OR MINIMU? OR MAX OR MAXIM-
            UM OR RANGE?)
S30         0   S29 AND IC=G05F
S31        94   S27 AND IC=G06F
S32         9   S31 AND S1
S33         9   S32 NOT S18
S34        27   S16 OR S33
S35        25   S34 AND IC=G06F
S36        25   S35 NOT S18
S37         4   S36 NOT AD=20010807:20030807
S38         4   S37 NOT AD=20030807:20050512
S39        76   S17 AND (DSS OR AI OR ARTIFICIAL()INTELLIGEN? OR NEURAL()N-
            ETWORK? OR NEURAL()SYSTEM? OR (MACHINE OR COMPUTER?)(2N)(LEAR-
            N? OR TEACH? OR TRAIN?))
S40         2   S39 AND S1
S41        41   S39 AND IC=(H04L OR G06F)
S42        41   S41 OR S40
S43        38   S42 NOT AD=20010807:20030807
S44        37   S43 NOT AD=20030807:20050512
S45        37   S44 NOT (S38 OR S33 OR S25)
S46        37   IDPAT (sorted in duplicate/non-duplicate order)
S47        35   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Nov 1976-2005/Jan(Updated 050506)
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File 350:Derwent WPIX 1963-2005/UD,UM &UP=200529

25/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015963127 **Image available**
WPI Acc No: 2004-120968/200412
XRPX Acc No: N04-096836
Iterative feedback **driven system for e.g. building value web, facilitates emergence in virtual intelligent agents, so that local interactions between agent result in discernible macro behavior**
Patent Assignee: TAYLOR G (TAYL-I); TAYLOR M (TAYL-I)
Inventor: TAYLOR G; TAYLOR M
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040006566	A1	20040108	US 2000246118	P	20001107	200412 B
			US 200114718	A	20011107	

Priority Applications (No Type Date): US 2000246118 P 20001107; US 200114718 A 20011107
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040006566	A1		124	G06F-017/00	Provisional application US 2000246118

Abstract (Basic): US 20040006566 A1
NOVELTY - The system imbeds mind-like characteristics and behavior in virtual intelligent agents that performs task, represent existing articles of value and trade, search databases and other virtual environments. Emergence is facilitated in the agents, such that local interactions with other agents result in discernible macro behavior.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for interactive, **feedback** driven method.
USE - For building and sustaining value webs, for optimizing agent pattern language values in collaborative environment e.g. transport environments, environments including navigation, global positioning system (GPS) and communication systems, large-scale electronic work walls, electronic assistants and displays, real-time **videoconferencing**, intelligent agents, data ware houses, jet aircraft, toys, games, video displays, computers.
ADVANTAGE - Provides a record of each working session for the user to review and learn from, to increase his/her efficiency, consistently accomplishes desired kinds of results by facilitating emergence in agents.
DESCRIPTION OF DRAWING(S) - The figure shows the block diagram explaining single iteration of augmenting knowledge commerce.
pp; 124 DwgNo 1/24
Title Terms: ITERATIVE; **FEEDBACK** ; DRIVE; SYSTEM; BUILD; VALUE; WEB; FACILITATE; EMERGENCE; VIRTUAL; INTELLIGENCE; AGENT; SO; LOCAL; INTERACT; AGENT; RESULT; DISCERNIBLE; MACRO; BEHAVE
Derwent Class: T01
International Patent Class (Main): **G06F-017/00**
File Segment: EPI

25/5/21 (Item 21 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010997681 **Image available**
WPI Acc No: 1996-494630/199649
XRPX Acc No: N96-417148

Digital data correlating detector - in which second judgment unit judges that input data is in agreement **with inverted comparison pattern, when inharmonious number output from comparator is larger than predetermined** second limit **value**

Patent Assignee: ANRITSU CORP (ANRI)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8255090	A	19961001	JP 9583368	A	19950315	199649	B

Priority Applications (No Type Date): JP 9583368 A 19950315
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8255090	A		5	G06F-011/00	

Abstract (Basic): JP 8255090 A

The detector has a shift register (1) which receives one bit of input data and shifts them. A comparator (2) compares the parallel data output of the shift register with a predetermined comparison pattern (3) and outputs an inharmonious number (f). A first judgment unit (4) judges that the input data is in **agreement** with the comparison pattern when the inharmonious number is smaller than a predetermined first limit value (S1).

A second judgement unit (6) judges that the input data is in **agreement** with the inverted comparison pattern, when the inharmonious number is larger than a **second limit** value (S2).

ADVANTAGE - Enables detection of inverted and non-inverted coincidence of pattern. Avoids need for shift register for performing inversion.

Dwg.1/6

Title Terms: DIGITAL; DATA; CORRELATE; DETECT; SECOND; UNIT; JUDGEMENT; INPUT; DATA; AGREE; INVERT; COMPARE; PATTERN; NUMBER; OUTPUT; COMPARATOR; LARGER; PREDETERMINED; SECOND; LIMIT; VALUE
Derwent Class: T01; W01
International Patent Class (Main): **G06F-011/00**
International Patent Class (Additional): H04L-001/08
File Segment: EPI

47/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013777973 **Image available**
WPI Acc No: 2001-262184/200127
XRPX Acc No: N01-187538

Neural network **with corrigenda judging function for data mining, selects multivalue output signal of** neural network **based on which corrigenda answer judging information is output**

Patent Assignee: KOKUSAI DENSHIN DENWA CO LTD (KOKU)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2001051969	A	20010223	JP 99229192	A	19990813	200127	B

Priority Applications (No Type Date): JP 99229192 A 19990813
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2001051969	A		16	G06F-015/18	

Abstract (Basic): JP 2001051969 A

NOVELTY - The binary **neural networks** (31,35,39) are arranged in parallel. The multivalue output signals of **neural networks** (29,32) are sent via threshold circuits (30,33) to processor (24) for comparison. The corrigenda answer evaluation of multivalue output signal is performed. A selection unit (25) selects one of the output signals and outputs corrigenda answer judging information based on selected signal.

DETAILED DESCRIPTION - The threshold circuit (30) converts signal output from **neural network** based on multivalue teaching signal and learning input data. **Another threshold** circuits (33) converts signal from another **neural network** (32) based on other teaching signal and learning signal. The output of binary **neural networks** are compared.

USE - For judging error correct answer or wrong answer for pattern recognition, data mining and image processing.

ADVANTAGE - Highly accurate answer is obtained using simple components by eliminating use of many **neural networks** . Enables high rate of pattern recognition, efficient performance and high generalization capability.

DESCRIPTION OF DRAWING(S) - The figure shows the component of **neural networks** with corrigenda answer judging function. (Drawing includes non-English language text).

Processor (24)
Selection unit (25)
Neural networks (29,31,32,35,39)
Threshold circuits (30,33)
pp; 16 DwgNo 1/4

Title Terms: NEURAL; NETWORK; JUDGEMENT; FUNCTION; DATA; MINE; SELECT; OUTPUT; SIGNAL; NEURAL; NETWORK; BASED; ANSWER; JUDGEMENT; INFORMATION; OUTPUT
Derwent Class: T01
International Patent Class (Main): **G06F-015/18**
File Segment: EPI

47/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011933712 **Image available**
WPI Acc No: 1998-350622/199831
XRPX Acc No: N98-273779

Neural network **retraining for transmission of messages - retrains second** neural network **created by first** neural network **to detect anomality**

Patent Assignee: NORTHERN TELECOM LTD (NELE); CEREBRUS SOLUTIONS LTD (CERE-N); NOTEL NETWORKS CORP (NELE)
Inventor: BARSON P C; EDWARDS T J; FIELD S; HAMER P; HOBSON P W; TWITCHEN K J

Number of Countries: 080 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2321364	A	19980722	GB 971196	A	19970121	199831	B
WO 9832086	A1	19980723	WO 98GB140	A	19980114	199835	
AU 9857710	A	19980807	AU 9857710	A	19980114	199901	
EP 897566	A1	19990224	EP 98901368	A	19980114	199912	
			WO 98GB140	A	19980114		
US 6067535	A	20000523	US 97869884	A	19970605	200032	
EP 897566	B1	20030827	EP 98901368	A	19980114	200358	
			WO 98GB140	A	19980114		
DE 69817487	E	20031002	DE 617487	A	19980114	200372	
			EP 98901368	A	19980114		
			WO 98GB140	A	19980114		

Priority Applications (No Type Date): GB 971196 A 19970121
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2321364	A		102	H04M-003/38	
WO 9832086	A1	E		G06F-017/60	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 9857710	A			G06F-017/60	Based on patent WO 9832086
EP 897566	A1	E		G06F-017/60	Based on patent WO 9832086
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE					
US 6067535	A			G06N-003/02	
EP 897566	B1	E		G06F-017/60	Based on patent WO 9832086
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE					
DE 69817487	E			G06F-017/60	Based on patent EP 897566 Based on patent WO 9832086

Abstract (Basic): GB 2321364 A

The method of managing the processing of information using a supervised training-multi-layered perceptron neuron network (261) and information relating to the transmission of messages in telecommunications network (203) involves monitoring the performance of the first **neural network** in processing the information. The second **neural network** of the same topology is created as the first when a predetermined performance **threshold** is reached.The **second neural network** is retrained whilst continuing to process the information

using the first **neural network** . If the **neural networks** are implemented using signals. Retraining can be facilitated by using a persistence mechanism to enable the objects to be stored and moved.

USE-Fraud detection.

ADVANTAGE- Provides pattern of fraud behaviour and detects as many different types of present and evolving fraud.

Dwg.1/18

Title Terms: NEURAL; NETWORK; TRANSMISSION; MESSAGE; SECOND; NEURAL; NETWORK; FIRST; NEURAL; NETWORK; DETECT

Derwent Class: W01

International Patent Class (Main): **G06F-017/60** ; G06N-003/02; H04M-003/38

International Patent Class (Additional): **G06F-015/80** ; G07F-007/08; H04M-015/00; H04Q-003/00; H04Q-007/38

File Segment: EPI

47/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011742812 **Image available**
WPI Acc No: 1998-159722/199814
XRPX Acc No: N98-126879

On-line training system for neural network **- only selects training data vectors for training which have information content above threshold value**

Patent Assignee: SIEMENS AG (SIEI)
Inventor: DECO G; OBRADOVIC D; SCHUERMANN B

Number of Countries: 019 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9807100	A1	19980219	WO 97DE1567	A	19970724	199814 B
EP 978052	A1	20000209	EP 97935479	A	19970724	200012
			WO 97DE1567	A	19970724	
JP 2000516739	W	20001212	WO 97DE1567	A	19970724	200101
			JP 98509280	A	19970724	
EP 978052	B1	20011031	EP 97935479	A	19970724	200169
			WO 97DE1567	A	19970724	
DE 59705226	G	20011206	DE 505226	A	19970724	200203
			EP 97935479	A	19970724	
			WO 97DE1567	A	19970724	

Priority Applications (No Type Date): DE 1032245 A 19960809
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9807100	A1	G	27	G06F-015/80	
Designated States (National): JP US					
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
EP 978052	A1	G		G06F-015/80	Based on patent WO 9807100
Designated States (Regional): DE FR GB					
JP 2000516739	W		30	G06F-015/18	Based on patent WO 9807100
EP 978052	B1	G		G06F-015/80	Based on patent WO 9807100
Designated States (Regional): DE FR GB					
DE 59705226	G			G06F-015/80	Based on patent EP 978052
					Based on patent WO 9807100

Abstract (Basic): WO 9807100 A

The training system selects the training data for the **neural network** using evaluation of the information content of at least one training data vector, by comparing it with a threshold value. The training data vector is selected for training when the threshold value is exceeded and is rejected when the threshold is not reached.

The entered training data vectors may be grouped in clusters, with evaluation of the information content of each cluster, with at least one training data vector selected from each cluster with an information content above a **second threshold** .

ADVANTAGE - Reduced processing capacity requirement.

Dwg.2/5

Title Terms: LINE; TRAINING; SYSTEM; NEURAL; NETWORK; SELECT; TRAINING; DATA; VECTOR; TRAINING; INFORMATION; CONTENT; ABOVE; THRESHOLD; VALUE
Derwent Class: T01
International Patent Class (Main): **G06F-015/18** ; **G06F-015/80**
File Segment: EPI

47/5/15 (Item 15 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010299259 **Image available**
WPI Acc No: 1995-200520/199526
XRPX Acc No: N95-157486

Stabilised adaptive neural network **based control system - has nominal control system augmented by adaptive control to generate additional compensating control signals based on differences between model and actual system output**

Patent Assignee: NORTHROP GRUMMAN CORP (NOTH); GRUMMAN AEROSPACE CORP (GRUA)
Inventor: EILBERT J L; ENGEL S J; HUANG C Y; EIBERT J L

Number of Countries: 019 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9514277	A1	19950526	WO 94US11834	A	19941020	199526	B
US 5493631	A	19960220	US 93153096	A	19931117	199613	

Priority Applications (No Type Date): US 93153096 A 19931117
Cited Patents: 2.Jnl.Ref; US 5113483; US 5287430; US 5313559
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9514277	A1		17	G06F-015/18	
Designated States (National): CA JP					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
US 5493631	A		9	G06F-015/18	

Abstract (Basic): WO 9514277 A

The control system has an actuator (1), a command control signal generator, result sensors (4,7), a nominal control system and an auxiliary adaptive control system. The actuator initiates action in a plant (2) in response to a command control signal. The command control signal generator produces a command control signal in response to a command and supplies the command control signal to the actuator to cause the actuator to initiate the action in the plant.

The result sensors output first and second signals based upon the results of the action in the plant. A first control signal is generated in response to sensing of the results of the action by the nominal control signal. The auxiliary adaptive control system compares the action, as indicated by the second sensor signal with a model of the action (8) based on the command. A second control signal is generated in response to the comparison. The first and second control signals are combined with the command control signal to modify the command control signal supplied to the actuator.

USE/ADVANTAGE - Auxiliary **neural network** controller. Ensures safety of overall system. Combines high performance with robustness.

Dwg.1/5

Title Terms: STABILISED; ADAPT; NEURAL; NETWORK; BASED; CONTROL; SYSTEM; NOMINAL; CONTROL; SYSTEM; AUGMENT; ADAPT; CONTROL; GENERATE; ADD; COMPENSATE; CONTROL; SIGNAL; BASED; DIFFER; MODEL; ACTUAL; SYSTEM; OUTPUT
Derwent Class: T01; T06; W06; W07
International Patent Class (Main): **G06F-015/18**
File Segment: EPI

47/5/21 (Item 21 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009149382 **Image available**
WPI Acc No: 1992-276821/199233
XRPX Acc No: N92-211690

Neural network **processor for solving competitive assignment problems - has matrix of NxM processing units each corresp. to pairing of row elements with column elements each having programmed limits**

Patent Assignee: NASA US NAT AERO & SPACE ADMIN (USAS)
Inventor: EBERHARDT S P

Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US N7744042	N	19920615	US 91744042	A	19910812	199233	B
US 5195170	A	19930316	US 91744042	A	19910812	199313	

Priority Applications (No Type Date): US 91744042 A 19910812
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US N7744042	N		37	G06F-015/00	
US 5195170	A		16	G06F-015/18	

Abstract (Basic): US N7744042 N

The **neural network** processor consists of a matrix of NxM processing units, each of which corresponds to the pairing of a first number of elements of (Ri) with a second number of elements (Cj). The limits of the first number are programmed in row control superneurons, and the **limits** of the **second** number are programmed in column superneurons as MIN and MAX values.

The cost (weight) Wij of the pairings is programmed separately into each PU. For each row and column of PUs, a dedicated constraint superneuron insures that the number of active neurons within the associated row or column fall within a specified range. Annealing is provided by gradually increasing the PU gain for each row and column or increasing positive feedback to each PU, the latter being effective to increase hysteresis of each PU or by combining both of these techniques.

USE - E.g. for scheduling segmented data cells queued at input terminals of asynchronous transfer mode telecommunication switching.

Dwg.2/8

US 7744042 N

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Dwg.2/8

US 7744042 A

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USE - E.g. for scheduling segmented data cells queued at input terminals of asynchronous transfer mode telecommunication switching.

Dwg.2/8

Title Terms: NEURAL; NETWORK; PROCESSOR; SOLVING; COMPETE; ASSIGN; PROBLEM; MATRIX; PROCESS; UNIT; CORRESPOND; PAIR; ROW; ELEMENT; COLUMN; ELEMENT; PROGRAM; LIMIT
Derwent Class: T01; W01; W06
International Patent Class (Main): **G06F-015/00** ; **G06F-015/18**
File Segment: EPI

47/5/31 (Item 31 from file: 347)
DIALOG(R)File 347:JAPIO

04660978 **Image available**
NEUROCOMPUTER

PUB. NO.: 06-332878 [JP 6332878 A]
PUBLISHED: December 02, 1994 (19941202)
INVENTOR(s): OBUCHI YASUNARI
SAGAWA HIROHIKO
OHIRA EIJI
SAKIYAMA ASAKO
SAGARA KAZUHIKO
INOUE KIYOSHI
OKI MASARU
TODA YUJI
APPLICANT(s): HITACHI LTD [000510] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 05-125707 [JP 93125707]
FILED: May 27, 1993 (19930527)
INTL CLASS: [5] **G06F-015/18** ; G06G-007/60
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)

ABSTRACT

PURPOSE: To provide a hardware for providing a solution at high speed by using a state change concerning a target function and a state change concerning limit conditions selectively corresponding to a state when solving a limited optimizing problem by using a **neural network** .

CONSTITUTION: One unit 101 is composed of two neurons 102 and 103 and they become the components of the network. Additionally, several neurons 107 for state decision are existent and corresponding to the state of the network, a signal is sent for showing which neuron in each unit is outputted. In each unit, any neuron outputs data corresponding to that signal. Since the state is changed so as to decrease the value of the target function when the state satisfies the limit conditions with sufficient accuracy or the state is changed so as to satisfy the limit conditions when the state is considerably **against** the **limit** conditions, the solution can be provided at high speed rather than the case of optimization while mixing both of them in a fixed rate at all times.

47/5/34 (Item 34 from file: 347)
DIALOG(R)File 347:JAPIO

03533458 **Image available**
LEARNING MACHINE

PUB. NO.: 03-196358 [JP 3196358 A]
PUBLISHED: August 27, 1991 (19910827)
INVENTOR(s): SAKAGAMI SHIGEO
KODA TOSHIYUKI
SHIMEKI TAIJI
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TOGAWA HAYATO
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 01-339001 [JP 89339001]
FILED: December 26, 1989 (19891226)
INTL CLASS: [5] **G06F-015/18**
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)
JOURNAL: Section: P, Section No. 1279, Vol. 15, No. 462, Pg. 88, November 22, 1991 (19911122)

ABSTRACT

PURPOSE: To shorten the time required for learning by determining the steepest drop direction as a minimum error point search direction when a last weight variation quantity is less than a constant threshold value and determining a conjugate gradient direction in other cases.

CONSTITUTION: In a 1st minimum error point search, a search direction determining means 16 determines the steepest drop direction as the minimum error search direction in a weight space represented by weight vectors of variable weight multiplying means 3 - 8. In **2nd** and succeeding **minimum** error searches, the search direction determining means 16 determines the steepest drop direction as the minimum error point search direction in the weight space when the last weight variation quantity is less than the constant threshold value or the conjugate gradient direction in other cases. Thus, the best minimum error point search direction is found to make the error sufficiently small in a short learning time and the learning is completed.